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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/406,570 | 09/24/1999 | AKIHIKO SHIMIZU | 2271/57219-A | 1757 |

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EXAMINER

PSITOS, ARISTOTELIS M

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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2653

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DATE MAILED: 12/01/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

TS

Office Action Summary

Application No.

09/406,570

Applicant(s)

SHIMIZU ET AL.

Examiner

Aristotelis M Psitos

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 October 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 7-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 7-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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DETAILED ACTION

1. Applicant's response of 10/10/03 has been considered with the following results.

Information Disclosure Statement

The IDS of 9/12/03 cites the JP equivalent of the US patent to Mieda et al, US pat. # 5,673,250 all ready cited by the examiner in paper #6. Since no additional information concerning such JP document has been furnished, the examiner concludes that it adds nothing more than already present in the US equivalent and hence, has not been further considered nor HAS BEEN MADE OF RECORD.

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

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1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1, 18, 7, 8 and 13 are rejected under 35 U.S.C. 102(b/e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Nakayama et al.

Under 102 considerations,

Nakayama et al discloses an optical information –recording medium – optical disc – various types, included a phase type. Furthermore, as depicted in figure 3, there are both lands and grooves (102 and 103) on a substrate. Furthermore, the ability⁷ of having information recorded in the lands is disclosed as land/groove recording. These lands and grooves alternate and one land area is between two grooves.

✓ With respect to figure 3, there is shown prepits 104. The depth of these prepits is at a level equal
✓ to the level of the groove.

Finally, Nakayama et al also discloses the appropriate tracking control ability – see col. 16 lines 10 plus with respect to figure 13.

If applicants can convince the examiner that the phase depth of the prepits is not the same as that of the track depth, then the examiner would rely upon either upon Takahashi et al which teaches such an ability in this environment, see claim 4 for instance, or JP 11-66630 which also discloses the depth of the prepits equal to that of the track.

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The examiner interprets the method limitations of claims 18 and 7 as flowing from the product, and hence met.

It would have been obvious to modify the base system of Nakayama et al with the above depth teaching from either Takahashi et al or JP 11-66630 because the variation in the depth is considered an optimization ability of existing elements and obvious to those of ordinary skill in the art.

Response to Arguments

4. Applicant's arguments filed 10/10/03 have been fully considered but they are not persuasive.

Applicant focuses on the alleged deficiency of the primary reference to Nakayama et al, that is the selection of the track pitch of the information track and the width and length of the phase pit are selected accordingly.

As stated in the previous OA, the Nakayama et al document does provide for the appropriate detection capability: The prepits inherently possess a width and length, and there is inherently a track pitch for the information track. Furthermore as discussed with respect to figures 20,21 and 34, track pitch, and prepits relationships are discussed as further exemplified in col. 29, line 33 – to col. 30 line 26. Because the entire intent of the document is to provide for read out of information, the examiner concludes that such description meets the claimed and argued limitations.

5. Claims 2, 3, 9,10,11 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over the acknowledged prior art as applied to claims 1, 8 and 13 above, and further in view of Tsuchiya et al.

The limitations recited (it is noted that claims 9,10, 11 and 15 duplicate claims 2 and 3 respectively, and hence the examiner will only discuss the limitations of claims 2 and 3 specifically, but the position taken is the same for claims 9,10,11 and 15) are found in the secondary reference to Tsuchiya et al - note his values for TP (track pitch), spot size, pit width. Although the groove width is not specifically recited, the examiner takes the position that the groove width in this environment ranges from .4 to .6 micrometers.

The examiner interprets the limitations of these claims to be modifications of the acknowledged prior art in order to maximize/optimize system parameters. Obviously the ability to provide for cross talk prevention is one of those parameters as is increasing recording density.

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Response to Arguments

5. Applicant's arguments filed 10/10/03 have been fully considered but they are not persuasive.

Furthermore, with respect to the argument focusing on Tsuchiya et al, in addition to the reasons stated above with respect to the primary reference, applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

6. Claims 2-5,9-12,14-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over the art as applied to claims 1,8 and 13 above, and further in view of Mieda et al or Sugaya et al

Again, the limitations of claims 9-12 and 14-17 are found in claims 2-5, and hence the examiner will discuss the limitations of claims 2-5.

Either Mieda et al or Sugaya et al depicts optical records having a plurality of pit formats available for maximizing system parameters such as cross talk reduction/ increasing recording density.

In Mieda et al, figs. 3-5 provide for a variety of parameters to be varied.

The examiner interprets the "short pit" parameters for meeting the limitations of claims 2 & 3, while the "long pit" parameters for the limitations of claims 4 and 5.

It would have been obvious to one of ordinary skill in the art to modify the acknowledged prior art with the above teachings from Mieda et al -motivation being to maximize system parameters.

Applicants' attention is also drawn to Sugaya et al, which also teaches the parameter variations re TP, LP, and BD and can be relied upon to meet the limitations of claims 2,3, 9,10,14 and 15.

Response to Arguments

6. Applicant's arguments filed 10/10/03 have been fully considered but they are not persuasive.

Furthermore, with respect to the argument focusing on Mieda et al /Sugaya et al, in addition to the reasons stated above with respect to the primary reference, applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

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Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Matsubayashi, and Kuroda et al – see figures 3,5 6,8 and 9 in Matsubayashi and figure 4 and its discussion starting at col.5, line 36. These references can be relied upon in place of the primary reference to Nakayama et al for also disclosing the appropriate prepat requirements.

Ahn et al and Yamaoka et al are also cited as illustrative of prepat with the claimed requirements, but do not have any particular details as to the differential reproduction.

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Hard copies of the application files are now separated from this examining corps; hence the examiner can answer no questions that require a review of the file without sufficient lead-time.

Any inquiries concerning missing papers/references, etc. must be directed to Group 2600 Customer Services at (703) 306-0377.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aristotelis M Psitos whose telephone number is (703) 308-1598. The examiner can normally be reached on M-Thursday 8 - 4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William R. Korzuch can be reached on (703) 305-6137. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9314.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

Aristotelis M Psitos
Primary Examiner
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A handwritten signature in black ink, appearing to read 'A. Psitos', written in a cursive style.

AMP